

WE CLAIM:

1. A method for identifying changed records in a file on an electronic token, the method comprising steps of:
calculating at least one change detection code (CDC) for records of the file;
comparing the calculated CDC with a respective associated, stored CDC in order to determine if at least one associated record has changed since the stored CDC was calculated; and
if the calculated CDC is not equal to the stored CDC, executing a predefined algorithm to effect registration of a change, and saving the calculated CDC as the stored CDC.
2. A method as claimed in claim 1, wherein the step of calculating the at least one CDC comprises a step of calculating a cyclic redundancy check (CRC).
3. A method as claimed in claim 1, wherein the step of comparing comprises a step of determining if the at least one associated record is changed and yields information regarding the change, the information being input to the predefined algorithm.
4. A method as claimed in claim 3, wherein the step of executing comprises a step of effecting the registration by issuing a message to an electronic token reader in which the electronic token is docked, the message containing at least one parameter, regarding the change for use by a registering element to which the message is sent by a token-resident applet via the electronic token reader.

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5. A method as claimed in claim 4, wherein the step of executing further comprises a step of setting a response pending flag which is cleared if an acknowledgement of the message is received, wherein the flag is used to indicate that a message was not acknowledged.
6. A method as claimed in claim 5, wherein the step of executing comprises a step of setting one of a plurality of flags for each change depending on a type of change, so that different types of change can be differentiated.
7. A method as claimed in claim 6, wherein the step of determining comprises a step of using any flag set in association with the stored CDC, in conjunction with the values of the stored CDC and calculated CDC to determine if the record was changed since a last acknowledged message related to the record was sent.
8. A method as claimed in claim 4, wherein the step of effecting the registration comprises a step of sending the message to the registering element, which performs at least one of: synchronization of data across multiple data stores; update of a system with respect to the record; back-up of the record; and provision of a service feature in dependence on the change to the record.
9. A method as claimed in claim 8, wherein the step of sending a message comprises steps of issuing a short message service (SMS) message to a service provider that has access to the registering element.

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10. A method as claimed in claim 9, wherein the step of applying the predefined algorithm further comprises steps of:
- receiving information relating to the change;
- formulating a notice of change (NOC) message; and
- inserting as many NOC messages as possible into the SMS message before sending the SMS message.
11. A method as claimed in claim 10, wherein the electronic token is a subscriber identity module and the step of comparing further comprises a step of applying a comparison algorithm that executes on the subscriber identity module, the comparison algorithm being adapted to compare a CDC of each of a plurality of abbreviated dialing numbers (ADN) in the file; and the step of issuing comprises a step of directing a SMS message to the registering element, which is adapted to perform at least one of the following: ensure conformity of the file with other versions of the file stored elsewhere; back-up the file; and, provide a service feature in dependence on the change.
12. A method as claimed in claim 8, wherein the step of sending comprises steps of formulating the message by inserting the at least one parameter into respective fields of the message, and forwarding the message to the registration element.
13. A method as claimed in claim 12, wherein the step of formulating comprises steps of inserting a record identifier, and information that specifies the change.

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14. A method as claimed in claim 13, wherein the step of formulating comprises a step of inserting a value that indicates one of the following: the record was added; the record was deleted; and the record was modified.
15. An apparatus for providing a service to a subscriber having an electronic token, the apparatus comprising:
a change detection applet stored on the electronic token and adapted to be executed by a processor of the electronic token, the applet being adapted to identify records that have been changed since a change detection code (CDC) was calculated and stored in a memory of the electronic token, by calculating at least one current CDC for the records, and comparing the current CDC with a corresponding stored CDC, and further adapted to send a notice of change (NOC) message to a registering element for registering detected changes.
16. An apparatus as claimed in claim 15, wherein the change detection applet calculates a cyclic redundancy check (CRC) to derive the current CDC.
17. An apparatus as claimed in claim 16, further comprising a registering element adapted to receive the NOC messages and use a content of NOC messages to perform at least one of the following: back up records for which the NOC message was generated; synchronize the file with other files remotely stored but commonly associated with a subscriber; and, provide a service dependent upon the detected change.

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18. An apparatus as claimed in claim 15, wherein the electronic token is docked in a communications enabled device that comprises an electronic token reader adapted to exchange data in conformity with a predetermined protocol.
19. An apparatus as claimed in claim 18, wherein the electronic token comprises one of: a subscriber identity module (SIM) card compliant with a global system for mobile communications (GSM) standard; and a universal SIM (USIM) card.
20. An apparatus as claimed in claim 18, wherein the communications enabled device is adapted to function as a short message service (SMS) enabled telephone.
21. An apparatus as claimed in claim 15, further comprising a data store for storing a set of response pending flags that are associated with a list of records in the file, and the change detection applet is further adapted to use the set of response pending flags to determine if a record may have been changed since a last NOC message for the record was acknowledged.
22. An apparatus as claimed in claim 21, wherein the set of response pending flags comprises at least two flags used to encode change information, and the change detection applet is further adapted to use the plurality of flags, in conjunction with the stored CRC and current CRC, to determine if a notice of change message related to the record is to be sent.

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